

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
4 August 2005 (04.08.2005)

PCT

(10) International Publication Number
WO 2005/071979 A1

(51) International Patent Classification⁷: **H04Q 1/14**

(21) International Application Number:
PCT/IB2005/050164

(22) International Filing Date: 14 January 2005 (14.01.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0400095-6 19 January 2004 (19.01.2004) SE

(71) Applicant (for all designated States except US): **NORDIA INNOVATION AB** [SE/SE]; P.O. Box 7363, S-103 90 Stockholm (SE).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **ROOS, Sture** [SE/BR]; R.15 de Novembro 92 Vila Atlantica, SP 117300 Mongagua (BR).

(74) Agent: **ALBIHNS STOCKHOLM AB**; Linnégatan 2, P.O. Box 5581, S-114 85 Stockholm (SE).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

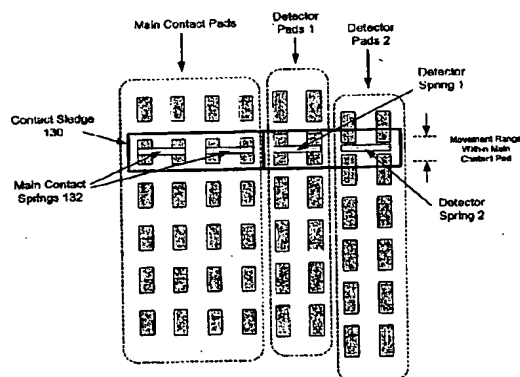
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **DRIVE AND POSITIONING METHOD AND SYSTEM FOR AUTOMATED SWITCH MATRIX**



(57) Abstract: A method and system for automating a switch matrix board for cross-connecting any line in a set of input lines to any line in a set of output lines, to be used e.g. in automating cross-connections for line pairs in a central office main distribution frame (MDF) of a telecommunication network. The switch matrix (100) comprises a plurality of contact sledges (130) driven by a frame (MDF) of a telecommunication network. The switch matrix (100) comprises a plurality of contact sledges (130) driven by a plurality of sledge positioning screws (120) that slidably engage a plurality of main contact pads (110) to cross-connect the lines. In an embodiment of the invention, two electric motors cooperate to position a lateral drive gear (158) to engage and rotate a selected sledge positioning screw (120), which moves the contact sledge. In another embodiment, a single electric motor operates together with a magnetic clutch assembly (180) to position the lateral drive gear to rotate the sledge positioning screw (120). A controller unit is connected to a position detection system and to the motor's to accurately position the contact sledge (130) on the switch matrix board.

WO 2005/071979 A1